

California Environmental Protection Agency



Air Resources Board

Vapor Recovery Certification Procedure

Proposed CP-202

Certification Procedure for Vapor Recovery Systems of Bulk Plants

Adopted: April 12, 1996
Amended: [Date of Amendment]

Note: ~~Strikeout text is deleted text.~~

Underlined text is new text.

Sections of text not shown are retained unchanged.

Amended Vapor Recovery Certification Procedure CP - 202 to read:

4 PERFORMANCE STANDARDS, PERFORMANCE SPECIFICATIONS, AND TEST PROCEDURES

Warning: The installation, operation, maintenance, and inspection of a vapor recovery system must be compatible with:

- (1) the application of specified performance standards, performance specifications, and test procedures and
- (2) the installation, operation, maintenance, and inspection of any other equipment associated with such system.

4.1 Performance Standards and Test Procedures

4.1.1 Efficiency

4.1.1.1 Performance Standard

A vapor recovery system shall achieve a minimum vapor recovery efficiency of ninety percent (90%) by weight to obtain certification by this procedure.

Note: For the purpose of comparing efficiency values and emission factors, the emission factor for uncontrolled displacement of gasoline vapors is defined as 8.4 pounds of hydrocarbon vapor displaced per thousand gallons of gasoline liquid dispensed (8.4 #/E3G). Thus, for example, ninety percent (90.0%) control efficiency by weight corresponds to emissions of 0.84 #/E3G.

8.4 #/E3G may not represent an accurate uncontrolled emission factor for vapors displaced during Bulk plant transfer operations. 8.4 #/E3G corresponds to a hydrocarbon concentration of 55% as C3 for displaced vapors. Bulk plant tests (from data set used for Bulk Plant Screening Method Development 80 test conducted between 1/88 and 12/92) show a range of concentration for displaced vapors from 9% to 62%. Data on the vapor return line concentration must be collected if an accurate determination of mass efficiency is to be made on a case-by-case basis.

4.1.1.2 Test Procedures

Compliance with the performance standard for efficiency shall be determined per:

TP-202.1

4.1.2 Vapor Vent Valve

4.1.2.1 Performance Standard

Any above ground bulk storage container shall be equipped with a pressure-vacuum (PV) relief valve which, when considered as part of the vapor recovery system, functions to allow the vapor recovery system to meet the performance standards and performance specifications herein. New bulk storage containers (installed after August 9, 1978) shall be designed to be compatible with a pressure-vacuum relief valve with a minimum pressure setting of +8 ounces per square in. gauge.

Compliance with this requirement may take the form of a manufacturer's design rating for the container; it is possible that the requirement of the first sentence can be met with a valve rated at less than +8 ounces per square in. gauge opening pressure (i.e. the container rating and valve rating may differ).

If the vapor recovery system employs a processing unit or incinerator, the system shall not cause out-breathing to occur from system pressure-vacuum relief valves including valves on any storage tanks, during normal operations of the vapor recovery system.

4.1.2.2 Test Procedures

Compliance with the performance standard for vapor vent valves shall be determined per:

TP-202.1

4.1.3 Leaks

4.1.3.1 Performance Standard

All equipment and connections shall be vapor tight and have no liquid leaks.

This requirement does not apply to vapor emissions from designed system outlets such as pressure relief vents (notwithstanding TP-202.1 §§ 2.3.3 and 2.3.4) or vapor processors and incinerators provided that such emissions are determined per TP-202.1 during certification testing.

4.1.3.2 Test Procedures

Compliance with the performance standard for leaks shall be determined per:

TP-204.3

4.1.4 Static Pressure

4.1.4.1 Performance Standard

During normal operation, the system shall not cause the pressure in the cargo tanks, while either delivering to the bulk plant or loading at the bulk plant, to exceed 18 inches H₂O gauge.

4.1.4.2 Test Procedures

Compliance with the performance standard for static pressure shall be determined per:

TP-202.1

4.2 Performance Specifications and Test Procedures

Performance specifications may be specified by the applicant in the required application information for each component or configuration of components of the vapor recovery system. Such performance specifications shall be the basis for any testing performed on any component or configuration of components when isolated from the rest of the system.

Other performance specifications shall be added, as appropriate after review of system information by the ARB Executive Officer.

4.2.1 Emission Factor

4.2.1.1

Performance Specification

A vapor recovery system shall have a maximum emission factor of 0.84 #/E3G to obtain certification by this procedure.

Note: For the purpose of comparing efficiency values and emission factors, the emission factor for uncontrolled displacement of gasoline vapors is defined as 8.4 pounds of hydrocarbon vapor displaced per thousand gallons of gasoline liquid dispensed (8.4 #/E3G). Thus, for example, ninety percent (90.0%) control efficiency by weight corresponds to emissions of 0.84 #/E3G.

8.4 #/E3G may not represent an accurate uncontrolled emission factor for vapors displaced during Bulk plant transfer operations. 8.4 #/E3G corresponds to a hydrocarbon concentration of 55% as C3 for displaced vapors. Bulk plant tests (from data set used for Bulk Plant Screening Method Development 80 test conducted between 1/88 and 12/92) show a range of concentration for displaced vapors from 9% to 62%. Data on the vapor return line concentration must be collected if an accurate determination of mass efficiency is to be made on a case-by-case basis.

As a performance specification for compliance testing, this standard shall be applied at facility operating conditions which are not altered for or by testing activities.

The facility operating conditions established during testing for the certification criterion shall each be specified as performance specifications subject to subsequent compliance testing.